

Cryptocentrus cheni Herre

Cryptocentrus cheni Herre, Lingnan Sci. Journ., vol. 12, no. 3, p. 429, July 11, 1933 (type locality, Hainan).

Depth $4\frac{4}{5}$; head $3\frac{2}{5}$. Snout $3\frac{1}{2}$ in head, blunt; eye $4\frac{1}{4}$, very high up, their inner margins touching; maxillary reaches $\frac{1}{2}$ in eye; mouth slightly oblique, large; wide upper lip fringed; upper teeth in 4 or more rows, with 2 pairs of canines near tip of jaw; lower teeth in 6 rows, with pair of large lateral canines.

Scales 95 in lateral series; 35 in transverse series. Body covered with cycloid scales, largest posteriorly, none before first dorsal and none on head, breast or pectoral base. Smooth cheeks without papillae.

D. VI, I, 10, first 5 spines with elongate thread-like tips, third,

fourth and fifth largest, $3\frac{4}{5}$ in length; second dorsal high, extends to caudal when depressed, penultimate ray $4\frac{3}{7}$ in length; A. I, 10, nearly as high, and next to last ray $4\frac{4}{5}$ in length; pectoral $4\frac{1}{10}$; ventrals $3\frac{4}{5}$.

Color in alcohol tan, with 6 broad vertical dark reddish brown bands, first 2 below first dorsal, next 3 below second dorsal, last on caudal peduncle and caudal base. Gape deep brown sprinkled with darker brown spots which extend downward on opercles and preopercles and were evidently ocelli in life. First dorsal colorless, with 2 rows of large elliptical dark-margined clear spots on membrane of upper half between spines and similar longitudinal stripe below spots. Second dorsal brown, each membrane with large elliptical dark-margined clear spot. Anal blackish, with a submarginal longitudinal clear band. Ventral

dusky. Other fins colorless.

Length 58 mm. (Herre.)

Hainan, China.

Depth 7; head 5, width $1\frac{1}{2}$.
Snout 4 in head; eyes not visible
but their position indicated by
orbital depressions; longitudinal
slit of pouch-like cavity much
longer than orbital depression;
mouth little oblique, lower jaw
little protruded, mouth angle
reaching opposite depression of eye;
band of small pointed teeth
internally and number of canines
in each jaw; 3 canine teeth on
each side below, and above only
4 equidistant ones.

Scales 55 in lateral series;
14 transversely. Scales small,
cycloid, deciduous, cover whole
body and part of head between
eyes and angle of mouth; few
embedded scales on front border
of opercle.

D. VII, 40, fin height medially
 $3\frac{1}{8}$ in head, last ray $2\frac{1}{4}$; A.

I, 38, median fin height $3\frac{2}{3}$, last ray 3; caudal $1\frac{1}{10}$, free from dorsal and anal; caudal peduncle depth $2\frac{7}{8}$; pectoral $2\frac{4}{5}$, rays 19; ventral I, 5, fin $2\frac{1}{3}$ in head.

Pale olivaceous all over and without any definite markings.
Length 110 mm. (Hora.)

Depth 14 to 16; head $4\frac{1}{2}$ to $9\frac{4}{10}$, length $1\frac{1}{5}$ to $1\frac{2}{5}$ times width. Snout $3\frac{1}{4}$ in head; eyes very small, on dorsal surface of head; mouth small, directed oblique, low, reaches opposite eye, jaws equal; several rows of teeth in both jaws, outer series slightly longer than others, none canines.

D. VI, 36 to 39, fin height over vent $2\frac{1}{2}$, origin slightly behind end of depressed pectoral; A. 33 to 35, fin height 3; caudal elongated, lanceolate, $4\frac{2}{5}$ in rest of fish, confluent with dorsal and anal; depth of caudal peduncle 3 in head; pectoral 2, rays 14; ventral rays $\frac{1}{2}$, 5, fin $1\frac{1}{4}$ in head.

Uniformly grayish yellow. Median caudal rays black.

Length 56 to 102 mm. (Hora.)
By Burma.

Depth $5\frac{1}{2}$; head 4, rounded anteriorly. Snout $2\frac{7}{10}$ in head; eye $4\frac{3}{4}$, directed obliquely upward; maxillary reaches opposite front eye edge; mouth oblique, subinferior, lower jaw slightly projecting; teeth uniserial in both jaws, fixed, conic, - and few minute conic teeth - directed back above mandibular symphysis; interorbital $9\frac{1}{2}$, very narrow.

Scales 50 in lateral series; 12 transversely. Head naked. Body covered with regular cycloid scales, become larger posteriorly. Scales on nape exceedingly small. Predorsal ^{with median longitudinal types} VI - 14, first dorsal higher than second, weak spines with filamentous ends, last ray reaches beyond caudal base; A. 14, little lower than soft dorsal, last ray reaching little beyond caudal base; caudal lanceolate, elongate; pectoral base muscular, tip reaches

vent, rays 18; ventral rays I, 5, completely united, not adnate to belly.

In alcohol grayish above, paler below. Head uniformly gray white. Scales on back with minute black spot at tip. Eight or 9 irregular dark bands pass from back half way down sides. Six V-shaped dark bands on sides. Fins grayish. Dorsal and upper half of caudal finely spotted with dark.

Length 105 mm.

(Oshima)

Hainan.

Smilogobius cinctus Herre

Smilogobius cinctus Herre, Bull.

Raffles Mus. Singapore, No. 12, p. 12,
pl. 9, May 1936 (type locality).

Reef in Singapore harbor. —
Herre and Myers, op. cit., No. 13,
p. 45, Aug. 1937 (type).

Depth $4\frac{3}{5}$; head $3\frac{1}{3}$, snout ^{width 135.}
 $4\frac{1}{3}$ in head; eye $4\frac{1}{3}$, equals
snout, well invading upper profile
of head; maxillary extends $\frac{1}{2}$ eye
diameter behind head, length
 $1\frac{9}{10}$ in head; canines very small
above, lacking below in female;
vomerine teeth small, coalesced
along inner edges into single notched
tooth; interorbital $4\frac{1}{2}$ in eye.

Scales 75 in lateral series; 30
transversely. Head and prepectoral
base naked.

D. VI, I, 10, third spine $1\frac{7}{8}$ in
head, first branched ray $1\frac{9}{10}$,

ninth ray $1\frac{3}{4}$; A. I, 9, second branched ray $2\frac{1}{4}$, eighth ray $1\frac{2}{5}$; caudal 1, ends in median point behind; least depth of caudal peduncle $2\frac{4}{5}$; pectoral $1\frac{1}{3}$; ventral $1\frac{3}{7}$. Anal papilla 2 in eye.

Color in alcohol dusky brown, with 3 blackish cross bands; first narrow just before dorsal and extends to preopercle angle, second from base of sixth dorsal spine to second dorsal origin downward to anus; third broad, width extending over base of last 5 dorsal rays and on caudal peduncle downward to anal base. Extending from dorsals to abdomen or anal 11 or 12 obscure white lines, first below fourth dorsal spine, last at caudal base; between each pair of lines along middle

of side 2 white circular dots, all together forming white streaks on posterior half of body; probably blue in life. Snout and opercles dark brown. Head sprinkled with dark brown circular spots, largest and most numerous on under side; spots were ocelli, probably blue-black in life, and extend upon pectoral and ventral bases. First dorsal dusky, with 6 transverse white bars, 2 uppermost continuous, others formed of circular spots. Anal same color as dark cross bands. Second dorsal, caudal and pectoral clear to somewhat dusky, without markings. Ventrals dark brown, thickly sprinkled with circular black dots.

Length 60 mm.
Singapore.

(Herre.)

Xenogobius singapurensis Herre

Xenogobius singapurensis Herre,
Bull. Raffles Mus. Singapore, no.
12, p. 13 pl. 10, May 1936 (type locality:
Reef in Singapore harbor). — Herre
and Myers, op. cit., no. 13, p. 45, Aug.
1937 (type).

Depth $4\frac{4}{5}$ to $5\frac{3}{4}$; head $3\frac{1}{2}$. Snout
 $3\frac{1}{5}$ to $3\frac{1}{2}$ in head; eye $5\frac{3}{5}$ to $5\frac{1}{2}$ in snout,
invades upper profile of head;
maxillary reaches $\frac{3}{5}$ in eye,
length $2\frac{3}{7}$ to $2\frac{1}{2}$ in head; 1 or 2 pairs
of upper anterior canines, and
pair of larger lower posterior
canines; the enormous vomerine
teeth coalesce into a unit by their
inner edges; interorbital $4\frac{1}{2}$ to $5\frac{1}{2}$
in eye.

Scales 75 to 80 in lateral series;
32 transversely. Head and prepectoral
space naked.

D. VI - I, 10, third spine $1\frac{1}{6}$ in
head, first ray $1\frac{3}{5}$, ninth ray $1\frac{1}{3}$;
A. I, 10 or 9, first branched ray
 $2\frac{2}{3}$, eighth or ninth ray $1\frac{1}{3}$; of
caudal $3\frac{1}{3}$ in rest of fish;
least depth of caudal peduncle
 $2\frac{7}{8}$; pectoral $1\frac{2}{7}$; ventral $\frac{1}{10}$
times head. Anal papilla small,
length $2\frac{1}{2}$ in eye.

In life ground color creamy,
with 7 or 8 bluish plum colored
cross bands over back and
extending diagonally forward and
downward to under side. Large
males may have posterior half of
body entirely dark bluish plum
color. Nape and sides of head
sprinkled with small dark blue
ocelli, which extend back along
dorsal region and all over sides
between second dorsal and anal
to caudal bas. In males dorsals
spotted with elongate blue ocelli,

posterior part of second dorsal, anal
and ventrals very dark blue.
In females fins all nearly color-
less, or ventrals more or less
dusky blue.

Length 33 to 84 mm. (Herre.)

Singapore. Differs from
Smilogobius cinctus chiefly in
coloration, the dark cross bands
on the body all more or less
inclined forward.

Genus Astrolethops Whitley

Astrolethops Whitley, Rec. Austral.
Mus., vol. 19, no. 4, p. 243, ~~figs.~~,
Sep. 19, 1935. Type Astrolethops
wardi Whitley, orthotypic.

Body robust, moderately elongate. Head moderate. Snout short. Eyes very small, well advanced in head. Maxillary reaches below eye. Jaws subequal. Lips thick, folded. Broad bands of minute conical teeth in each jaw. Tongue fleshy, broadly rounded. No barbels. Nostrils project as short tubes. Throat plicate. Gill openings wide, connected to fairly broad isthmus. Branchiostegal membrane greatly distensible, with 3 or 4 rays embedded in its tissue on each side. Head and body naked, covered with fatty skin and

sensory ridges transversely wrinkled. Groove along side of body like lateral line. Two separated dorsal fins, first of 6 weak spines. Soft dorsal and anal free from caudal, latter broadly rounded. Pectorals rounded, without free rays. Ventrals slender, separate, each with spine and 4 rays.

Included in the Gobiidae "its separate ventral fins obviously being of secondary importance to the sum of its other characters and not implying Eleotrid relationships. The present form rather recalls some of the blind gobies and is doubtless a sedentary and cryptozoic creature. Its general physionomy is superficially like that of a Brotulid, such as, for instance, Dinematichthys."

Austrolethops wardi Whitley

Austrolethops wardi Whitley, Rec.
Austral. Mus., vol. 19, no. 4, p. 243,
fig. 10, Sep. 19, 1935 (type locality,
off the Boat Port Beach, Lindeman
Island, Queensland).

Depth $3\frac{2}{3}$; head $3\frac{4}{5}$. Snout 6
in head; eye 8, $1\frac{2}{5}$ in snout;
maxillary reaches below hind eye
edge or little beyond; length $2\frac{2}{3}$
in head; broad bands of minute
~~canine teeth in each jaw; interorbital~~
 $3\frac{1}{5}$.

D. VI - 14, third spine $1\frac{9}{10}$ in head,
second $\bar{=}$ ray $1\frac{3}{7}$; A. 13, fin height
 $1\frac{3}{4}$; caudal $1\frac{1}{8}$; least depth of
caudal peduncle 2; pectoral $1\frac{1}{5}$,
rays 16; ventral rays I, 4, fin $1\frac{1}{2}$.
Dorsal and anal papilla $\bar{=}$ prominent.

Color in spirit pale fleshy

pink with viscera showing bluish through skin of belly. Fine minute blackish punctulations scattered on upper parts of head and body. Pupil of eye blue. Inner surfaces of opercles dusky. First dorsal mostly black, only hind part colorless. Second dorsal pale fleshy, with broad black margin. Anal similar, with much reduced black margin. Caudal and pectorals plain. One of ventral fins pale yellowish with some black towards tip; other plain, evidently damaged. No bands, bars, ocelli, or other striking color markings.

Length 68 mm.

Queensland.

(Whitley.)

Mars haydeni Herre)

Mars haydeni Herre, Philippine Journ. Sci., vol. 59, no. 3, p. 363, pl. 2, fig. 6, March 1936 (type locality, Tide flats at Bais, Oriental Negros).

Depth 6; head $3\frac{4}{7}$. Snout $4\frac{1}{2}$ in head; eye $4\frac{1}{2}$; maxillary reaches $\frac{1}{3}$ in eye, length 3 in head; upper jaw with an outer row of enlarged teeth, and behind band of 4 rows of minute teeth; similar band in lower jaw with outer row of much larger teeth ending in small lateral canine each side; vomer with 2 broad teeth; eyes very close together, inner margins touching, enter upper profile of head.

Scales 65 in lateral series.

Head, predorsal, prepectoral region and breast naked. Scales ctenoid posteriorly, become much smaller above pectoral but not extending forward beyond hind edge of opercle where apparently cycloid. Low median ridge from inter-orbital to first dorsal. Cheeks margined by sensory papillae, also with 2 longitudinal rows, while opercle with 2 perpendicular and some marginal rows.

D. VI - I, 12, second spine $1\frac{3}{4}$ in head, $\overline{\text{first}}$ branched ray $2\frac{1}{6}$; A. I, 12, $\overline{\text{first}}$ branched ray $2\frac{2}{3}$, eleventh ray 2; caudal 1, convex behind; least depth of caudal peduncle $2\frac{1}{2}$; pectoral $1\frac{1}{4}$; ventral $1\frac{2}{5}$.

Color in alcohol pale olive-brown with 9 darker cross bands across back and down sides, first 2 over head and nape, next 2 under first dorsal, 4 following under first

dorsal, and last on caudal peduncle.
Sides of head and anterior half of
body sprinkled with circular black
or dark brown spots. Caudal
crossed by several broad dark
bands on basal half, outer and
upper portion barred by rows
of black dots. Whitish first
dorsal with 2 longitudinal dark
brown bands. Whitish second
dorsal with basal dark band,
and 2 longitudinal rows of
elongate black spots on its
middle and upper portions. Clear
pectoral little dusky basally.
Anal and ventrals uniformly
blackish.

Length 32 mm.

(Herre.)

Oriental Negros, Philippines.
Said to differ from other species
of the genus "in its fins, poorer
development of sensory papillae
and vomerine teeth, and in its
occipital ridge."

Schismatogobius roxasi Herre

Schismatogobius roxasi Herre,
Philippine Journ. Sci., vol. 59, no. 3,
p. 362, pl. 2, fig. 5, March 1936 (type
locality, San Jose, Antique Province,
Panay).

Depth 5; head $2\frac{3}{4}$, width $1\frac{3}{4}$.
Snout $3\frac{7}{8}$ in head; eye $8, \frac{2}{3}$ in
snout; maxillary reaches far
behind eye or almost to preopercle
angle, length $1\frac{1}{2}$ in head; teeth
small, in bands of 5 or 6 rows in
both jaws; interorbital $6\frac{2}{5}$ in
head, flat.
no scales.

D. VII - I, 9, second spine $3\frac{2}{3}$
in head, first branched ray $2\frac{4}{5}$,
fourth $2\frac{1}{3}$; A. I, 8, first branched
ray $2\frac{7}{8}$; caudal $1\frac{1}{2}$, convex behind;
least depth of caudal peduncle 4;
pectoral $1\frac{2}{5}$; ventral $1\frac{3}{5}$.

Color in alcohol brown to yellowish brown, mottled with irregular flecks and streaks of blackish, and with 3 dark brown dorsal cross bands; first beneath first dorsal, second under middle of second dorsal, and third narrower one on caudal peduncle. Both dorsals, caudal and pectorals crossbarred by rows of black spots. Ventral rays colorless, membranes between black with mass of dusky spots; ventrals colorless.

Length 44 mm.

(Herre.)
Panay, Philippines. Said to be close to Gobiosoma insignum, differing in the extraordinary development of the maxillary. From Schismatogobius it differs markedly in the character of the teeth.

Callionymus gasterosteus Herre

Callionymus gasterosteus Herre, Copeia,
no. 1, p. 24, April 3, 1933 (type
locality, Titanki, Sibutu Islands,
Hulu Archipelago); The Fishes of the
Herre Philippine Expedition of 1931, p. 94, 1934
(Titanki).

Depth $3\frac{2}{3}$, short body thick set;
head trifle more than 3, width $1\frac{1}{8}$.
Snout $\frac{1}{3}$ in head, pointed; eye $2\frac{3}{5}$;
interorbital space $3\frac{3}{4}$; preopercular
spine $2\frac{2}{3}$, with 2 small, slightly
curved spines on its upper margin
and ends in slender, slightly
curved point.

D. IV-8, first dorsal low, first
spine $2\frac{1}{4}$ in head, second dorsal
nearly uniformly high, sixth ray $1\frac{4}{5}$;
A. II-7, eighth ray equals ventral
and $\frac{8}{9}$ of head; pectoral $1\frac{1}{2}$ in
head; ventral longer than pectoral,
not reaching anal.

General color of body and fins gray. Iris with silvery golden luster, with 6 or 7 radiating black-margined green stripes over outer part of eye, like spokes of a wheel; 2 are extended and cross interorbital space, uniting with their fellows from other eye; 2 others descend to throat but not meeting others. Dorsals, anals, pectorals and ventrals with bases and adjacent parts of body marked by large conspicuous circular blue spots or bands formed by fusion of such spots, each spot or band margined by heavy white line, outside which broad indigo blue stripe, then another white stripe and lastly a thin blackish line.

Similar large circular spot on belly and several small spots of same kind on head, each with 4 borders also. In life gray ground color light blue, spots indigo blue. (Herre.)

Length 28 mm.
Philippines.